Page 4, line 23, should read as follows:

a combinatorial organic molecule according to the inven-

On page 13, in a new line following the heading "CLAIMS", insert the following:

We claim:

Following page 14, insert the following new material on a new page:

--ABSTRACT OF THE DISCLOSURE

The invention relates to a peptide derived from an antigen recognized by autoantibodies, which peptide is reactive with autoimmune antibodies from a patient suffering from rheumatoid arthritis. The peptide according to the invention possesses a modified arginine residue. The invention also relates to antibodies against the peptide and a method of detection autoimmune antibodies.--

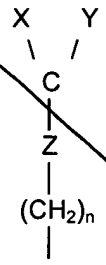
In the Claims:

Cancel claims 2 and 10 - 14 without prejudice.

Amend the following claims:

1. (Twice Amended) A peptide of about 21 or fewer amino acids, reactive with autoimmune antibodies from a patient suffering from rheumatoid arthritis, wherein the peptide is derived from a contiguous stretch of amino acid residues encoded by mRNA encoding an antigen recognized by autoimmune antibodies in a patient with rheumatoid arthritis, said mRNA comprising a codon for at least

one arginine residue, wherein at least one arginine residue in the peptide comprises a modified arginine residue with a side chain of the formula:



wherein

X is NH_2, CH_3, $NHCH_3$ or $N(CH_3)_2$;

Y is O, NH, $NHCH_3$ or $N(CH_3)_2$;

Z is O, NH or CH_2; and

n is 2, 3 or 4, on the condition that when X = NH_3 and Z = NH, Y is not NH.

4. (Thrice Amended) A peptide according to claim 1 wherein the peptide comprises a linear peptide selected from the group of peptides consisting of SEQ ID NO 1, SFQ ID NO 2, SEQ ID NO 3, SEQ ID NO 4, SEQ ID NO 5, SEQ ID NO 6, SEQ ID NO 7, SEQ ID NO 8 and SEQ ID NO 9.

9. (Twice Amended) A peptide according to claim 1 wherein the peptide is obtained by the proteolytic treatment of (pro)filaggrin, separation of peptide fragments formed by proteolysis and subsequent selection of the presence of a modified arginine residue in a peptide, which modified arginine residue was formed during the proteolytic treatment.

15. (Twice Amended) A method for the detection of autoimmune antibodies in sera of a patient, comprising the steps of:

contacting a peptide according to claim 1 with sera of the patient, and

detecting for the formation of a peptide and antibody complex.

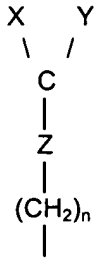
C14

Add the following new claims:

--16. The method of claim 15, wherein detecting comprises use of an antihuman antibody.

C15

17. A peptide of about 21 or fewer amino acids reactive with autoimmune antibodies from a patient suffering from rheumatoid arthritis, wherein the peptide is derived from a contiguous stretch of amino acid residues encoded by mRNA encoding a filaggrin or profilaggrin antigen, the mRNA comprising a codon for at least one arginine residue, wherein at least one arginine residue in the peptide comprises a modified arginine residue with a side chain of the formula:



Sub EH

wherein

X is NH_2, CH_3, $NHCH_3$ or $N(CH_3)_2$;

Y is O, NH, $NHCH_3$ or $N(CH_3)_2$;

Z is O, NH or CH_2; and

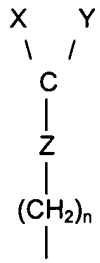
n is 2, 3 or 4, on the condition that when X = NH_3 and Z = NH, Y is not NH.

18. The peptide of claim 17 wherein the antigen comprises amino acids 306-324 of the C-terminal end of profilaggrin.

19. The peptide of claim 18 wherein the modified arginine residue is a citrulline residue, such that X is NH_2, Y is O, Z is NH and N is 3.

20. The peptide of claim 17 wherein the modified arginine residue is a citrulline residue, such that X is NH_2, Y is O, Z is NH and N is 3.

21. A peptide having the amino acid sequence selected from the group consisting of SEQ ID NO 1, SFQ ID NO 2, SEQ ID NO 3, SEQ ID NO 4, SEQ ID NO 5, SEQ ID NO 6, SEQ ID NO 7, SEQ ID NO 8, SEQ ID NO 9 and SEQ ID NO 10, wherein X therein is a modified arginine residue with a side chain of the formula:



wherein

X is NH_2, CH_3, $NHCH_3$ or $N(CH_3)_2$;

Y is O, NH, $NHCH_3$ or $N(CH_3)_2$;

Z is O, NH or CH_2; and

n = 2, 3 or 4, on the condition that when X = NH_3 and Z = NH, Y is not NH.

22. The peptide of claim 21 wherein the modified arginine residue is a citrulline residue, such that X is NH_2, Y is O, Z is NH and N is 3.

C15

23. The peptide of claim 21 wherein the peptide is a synthetic peptide.

24. The peptide of claim 21 wherein the peptide is immunologically reactive in an immunological assay for detection of rheumatoid arthritis.--